

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-F-0001

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

U S ENVIRONMENTAL PROTECTION AGENCY
USEPA/NHEERL MD-B343-03
109 T W ALEXANDER DR
RESEARCH TRIANGLE PA, NC 27711

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	11	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
16-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-F-0007

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SPECIAL WARFARE MEDICAL GROUP (AIRBORN)
U S ARMY J F K S W C S
3004 ARDENNES ST, STOP A, AOJK-MED
FORT BRAGG, NC 28310

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	822	0	822
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	1	0	1
11. Pigs	0	0	175	0	175
12. Other Farm Animals	0	0	4720	0	4720
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
09-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0001

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

WAKE FOREST UNIVERSITY
MEDICAL CENTER BOULEVARD

WINSTON SALEM, NC 27157

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	15	50	0	65
5. Cats	0	0	39	0	39
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	3	78	0	81
9. Non-human Primates	0	44	1046	0	1090
10. Sheep	0	19	95	0	114
11. Pigs	0	39	278	0	317
12. Other Farm Animals	0	0	18	0	18
13. Other Animals	0	0	591	18	609

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
18-FEB-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

WINSTON SALEM, NC 27157

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

18-FEB-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0004

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF NORTH CAROLINA
312 SOUTH BUILDING CB#4000

CHAPEL HILL, NC 27599

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	145	63	0	208
5. Cats	21	0	0	0	0
6. Guinea Pigs	0	0	85	0	85
7. Hamsters	0	0	0	0	0
8. Rabbits	0	2	11	0	13
9. Non-human Primates	0	2	0	0	2
10. Sheep	0	0	7	0	7
11. Pigs	0	61	42	0	103
12. Other Farm Animals					
13. Other Animals	0	0	139	0	139

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
12-DEC-2013

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0004

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF NORTH CAROLINA
312 SOUTH BUILDING CB#4000

CHAPEL HILL, NC 27599

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

[illegible]

ASSURANCE STATEMENTS

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

12-DEC-2013

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0005

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

NORTH CAROLINA STATE UNIVERSITY
CAMPUS BOX 7514

RALEIGH, NC 27695

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	2	40	57	0	97
5. Cats	7	1	57	0	58
6. Guinea Pigs	0	11	4	0	15
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	166	0	166
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	65	8	0	73
11. Pigs	0	342	287	0	629
12. Other Farm Animals	0	169	25	0	194
13. Other Animals	5	1278	435	0	1713

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
31-JAN-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0005

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

NORTH CAROLINA STATE UNIVERSITY
CAMPUS BOX 7514

RALEIGH, NC 27695

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

[illegible]

ASSURANCE STATEMENTS

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

31-JAN-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0007

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF NORTH CAROLINA @ CHARLOTTE
9201 UNIVERSITY CITY BLVD
CAMERON HALL, 3RD FLOOR
CHARLOTTE, NC 28223

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
18-NOV-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0010

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

EAST CAROLINA UNIVERSITY
DEPT OF COMPARATIVE MED., SCHOOL OF MED
212 LIFE SCIENCES BLDG
GREENVILLE, NC 27834

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	181	0	181
7. Hamsters	0	0	0	0	0
8. Rabbits	2	1	0	0	1
9. Non-human Primates	0	0	67	0	67
10. Sheep	0	0	0	0	0
11. Pigs	2	0	87	0	87
12. Other Farm Animals					
13. Other Animals	9	0	0	0	0

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
09-DEC-2013

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0010

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

EAST CAROLINA UNIVERSITY
DEPT OF COMPARATIVE MED., SCHOOL OF MED
212 LIFE SCIENCES BLDG
GREENVILLE, NC 27834

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

09-DEC-2013

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0013

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

GREER LABORATORIES INC
639 NUWAY CIRCLE N E
P O BOX 800
LENOIR, NC 28645

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	642	6220	0	0	6220
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	3	0	3
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
10-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0021

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF NORTH CAROLINA @ GREENSBORO
DIRECTOR FOR THE OFFICE OD RESEARCH COMPLIANCE
2718 MOORE HUMANITIES & RESEARCH ADMIN BLDG 1111 SPRING
GARDEN STREET

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals	0	8	0	0	8

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
03-FEB-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0021

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF NORTH CAROLINA @ GREENSBORO
DIRECTOR FOR THE OFFICE OD RESEARCH COMPLIANCE
2718 MOORE HUMANITIES & RESEARCH ADMIN BLDG 1111 SPRING
GARDEN STREET
GREENSBORO, NC 27412

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

[illegible]

ASSURANCE STATEMENTS

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED

03-FEB-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0022

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

NORTH CAROLINA A&T STATE UNIVERSITY
LAB. ANIMAL RESOURCE UNIT
116 WEBB HALL
GREENSBORO, NC 27411

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	1	0	0	0	0
5. Cats	0	1	0	0	1
6. Guinea Pigs	15	15	10	0	25
7. Hamsters	0	0	0	0	0
8. Rabbits	2	1	12	0	13
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	5	0	5
12. Other Farm Animals					
13. Other Animals	37	30	15	0	45

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
22-JAN-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0022

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

NORTH CAROLINA A&T STATE UNIVERSITY
LAB. ANIMAL RESOURCE UNIT
116 WEBB HALL
GREENSBORO, NC 27411

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

22-JAN-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0107

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

CAROLINAS MEDICAL CENTER
DIR OF COMPARATIVE MEDICINE, PO BOX 32861

CHARLOTTE, NC 28232

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	26	0	26
7. Hamsters	0	0	0	0	0
8. Rabbits	4	0	13	0	13
9. Non-human Primates	0	0	0	0	0
10. Sheep	4	0	33	0	33
11. Pigs	0	0	78	0	78
12. Other Farm Animals					
13. Other Animals	101	0	0	0	0

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
22-JAN-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0107

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

CAROLINAS MEDICAL CENTER
DIR OF COMPARATIVE MEDICINE, PO BOX 32861

CHARLOTTE, NC 28232

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

22-JAN-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0108

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

INTEGRATED LABORATORY SYSTEMS INC
PO BOX 13501

RESEARCH TRIANGLE PA, NC 27709

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
25-NOV-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0114

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

GASTON COLLEGE/VET TECH PROGRAM
201 HIGHWAY 321 SOUTH PO BOX 507

DALLAS, NC 28034

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	35	111	0	146
5. Cats	0	16	112	0	128
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	8	0	8
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	64	0	0	64
13. Other Animals	0	5	0	0	5

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
10-DEC-2013

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0114

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

GASTON COLLEGE/VET TECH PROGRAM
201 HIGHWAY 321 SOUTH PO BOX 507

DALLAS, NC 28034

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

[illegible]

ASSURANCE STATEMENTS

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

10-DEC-2013

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0123

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SYNECOR LLC
3908 PATRIOT DRIVE SUITE 170

DURHAM, NC 27703

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	18	0	50	0	50
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	16	0	16
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	2	0	2
11. Pigs	52	0	339	0	339
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
21-NOV-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0124

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

APPALACHIAN STATE UNIVERSITY
OFFICE OF RESEARCH PROTECTIONS
385/386 JOHN THOMAS HALL
BOONE, NC 28608

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	20	0	0	20
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	3	0	3
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	2	0	0	2
12. Other Farm Animals	0	0	8	0	8
13. Other Animals	1	0	0	0	0

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
03-FEB-2014

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0124

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

APPALACHIAN STATE UNIVERSITY
OFFICE OF RESEARCH PROTECTIONS
385/386 JOHN THOMAS HALL
BOONE, NC 28608

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

03-FEB-2014

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0125

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

A B TECH COLLEGE
VETERINARY MEDICAL TECH DEPT
340 VICTORIA ROAD
ASHEVILLE, NC 28801

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	504	57	0	561
5. Cats	0	303	38	0	341
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	24	0	0	24
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
12-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0126

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UROGENIX
801-12 CAPITOLA DR

DURHAM, NC 27713

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	2	0	0	2
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals	0	3	0	0	3

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
29-NOV-2013

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0126

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UROGENIX
801-12 CAPITOLA DR

DURHAM, NC 27713

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

[illegible]

ASSURANCE STATEMENTS

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED _____

29-NOV-2013

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0127

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

GRIFOLS INC
8368 US 70 WEST

CLAYTON, NC 27520

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	1605	0	490	2095
7. Hamsters	0	0	0	0	0
8. Rabbits	0	1525	0	0	1525
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
31-JAN-2014

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0129

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

THE HAMNER INSTITUTES
6 DAVIS DR, PO BOX 12137

RESEARCH TRIANGLE PA, NC 27709

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
10-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0130

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

BRADFORD SCHOOLS INC
309 E MOREHEAD ST
SUITE 220
CHARLOTTE, NC 28202

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

VET TECH INSTITUTE

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	4	32	536	0	568
5. Cats	2	39	334	0	373
6. Guinea Pigs	0	4	0	0	4
7. Hamsters	0	2	0	0	2
8. Rabbits	0	34	9	0	43
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals	0	3	2	0	5

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
09-DEC-2013

(b)(6), (b)(7)(c)

OMB APPROVED
0579-0036

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER
55-R-0130

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

BRADFORD SCHOOLS INC
309 E MOREHEAD ST
SUITE 220
CHARLOTTE, NC 28202

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

DATE SIGNED
09-DEC-2013

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0135

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

A D S MEDICAL SUPPORT TEAM INTERNATIONAL
7102 TILTON CT

FAYETTEVILLE, NC 28314

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	3	0	3
12. Other Farm Animals	0	0	31	0	31
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
16-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0136

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

MOLECULAR TOXICOLOGY INC
157 INDUSTRIAL PARK DR

BOONE, NC 28607

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	811	0	811
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
12-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0137

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

REMOTE SOLUTIONS LLC
3032 FALLS RIVER AVENUE

RALEIGH, NC 27614

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
03-FEB-2014

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0139

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

DAVID H MURDOCK RESEARCH INSTITUTE
150 RESEARCH CAMPUS DRIVE

KANNAPOLIS, NC 28081

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	141	0	141
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0141

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

ATLANTIC COAST COLLEGES
3901 CAPITAL BLVD SUITE 151

RALEIGH, NC 27604

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	12	130	53	0	183
5. Cats	15	47	19	0	66
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	5	0	0	5
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
03-FEB-2014

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0142

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

POWERED RESEARCH L L C
PO BOX 14466

DURHAM, NC 27709

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	1	95	0	96
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
21-NOV-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0143

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SOUTHEAST SWINE RESEARCH L L C
1308 HWY 258 N

KINSTON, NC 28501

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
26-NOV-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-R-0144

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

GLOBAL VACCINES INC
PO BOX 14827

RESEARCH TRIANGLE PARK, NC 27709

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	14	0	0	14
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
12-DEC-2013

(b)(6), (b)(7)(c)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED
0579-0036
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NUMBER
55-V-0003

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

VA MEDICAL CENTER
508 FULTON STREET
RESEARCH SERVICE (151)
DURHAM, NC 27705

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED
26-NOV-2013

(b)(6), (b)(7)(c)

- 1. Species (Common name):** Cat
2. Number of animals: 12
3. Exception: Lighting
4. Description: All animals are raised from birth to adulthood in total darkness.
5. Purpose and value of study: These studies examine the role of visual experience on the development of the multisensory processes by which the brain synthesizes information from different senses, like vision and hearing, to shape the way we perceive the world. By manipulating visual input during development we learn how the nervous system compensates. This work will be translated into clinical treatments, like prosthetic devices, to improve the lives of those with congenital or early-acquired sensory deficits.

- 1. Species (Common name):** Monkey
2. Number of animals: 37
3. Exception: Singly Housed Primates
4. Description: Each housing unit is equipped with an operant panel from which animals self-administer food and cocaine. Cocaine is provided via a tether that encloses a chronic, indwelling, intravenous catheter. Animals are singly-housed to continuously measure their intake and to deliver potential treatment drugs over extended periods of time which provides enhanced translational value.
5. Purpose and value of study: There are currently no FDA-approved medications for the treatment of cocaine addiction. These studies systematically investigate current off-label medications or new medications for cocaine addiction. These studies should provide important information relevant to clinicians.

- 1. Species (Common name):** Monkey
2. Number of animals: 24
3. Exception: Singly Housed Primates
4. Description: There are published data suggesting that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. These studies assess physiological and behavior measurements related to dopamine D₃ receptors, and social housing can reasonably be expected to confound our findings.
5. Purpose and value of study: Dopamine is a chemical in the brain that has been shown to affect drug addiction. These studies examine D₃ compounds that activate the dopamine D₃ receptor which has been identified as an important target for new medications for addiction.

- 1. Species (Common name):** Monkey
2. Number of animals: 24
3. Exception: Singly Housed Primates
4. Description: There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. The present studies assess physiological and behavior measurements related to the dopamine system using PET imaging, CSF collection, and behavioral pharmacology techniques in monkeys that have been prenatally exposed to

cocaine or control animals. If these monkeys were social housed, it would confound our findings.

5. Purpose and value of study: The long-term neurological and behavioral consequences of this early drug exposure and whether this early experience makes young adults more vulnerable to cocaine abuse are unknown. These studies are aimed at understanding the neurobiological and behavioral consequences of prenatal cocaine exposure in adult rhesus monkeys.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 27
- 3. Exception:** Singly Housed Primates
- 4. Description:** There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. Aims 1 and 3 in the present studies assess physiological and behavioral measurements related to the dopamine system using PET imaging, CSF collection, and the acquisition of cocaine self-administration in female monkeys. Monkeys are individually housed upon arrival to the laboratory while we collect these measures. The animals are then socially housed and the measures are redetermined and studied as a function of social rank.
- 5. Purpose and value of study:** We can examine sex differences, comparing the effects we previously published in male monkeys, to those found in this study using female monkeys. Human clinical data suggests that women become addicted sooner than men and experience a harder time remaining abstinent. These studies should provide important information with regards to sex differences in measures associated with vulnerability and abuse of drugs

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 8
- 3. Exception:** Singly Housed Primates
- 4. Description:** There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs. Thus, it is imperative that all animals in the study have identical housing conditions. It would be a huge confound if we were able to pair house some, but not all animals contained in the same study. The present studies assess physiological and behavior measurements related to the nicotinic and dopaminergic systems using CSF collection, and behavioral pharmacology techniques.
- 5. Purpose and value of study:** Cigarette smoking resulting in nicotine dependence represents the most prevalent form of chemical dependence in the United States. Despite several FDA-approved drug treatments to combat nicotine dependence, relapse rates remain high. One of the most successful drug treatments for nicotine dependence, Chantix® has a success rate that is less than ~40%. Thus, there is a need for additional research with nicotine. While nicotine self-administration has been readily established in rodents, few investigators have successfully reported nicotine self-administration in nonhuman primate models. Once established we will evaluate current FDA-approved treatments and new compounds in our monkey model. We will also use these studies to better understand how nicotine may interact with the effects of cocaine and methamphetamine.

- 1. Species (Common name):** Monkey
2. Number of animals: 6
3. Exception: Singly Housed Primates
4. Description: Each housing unit is equipped with an operant panel from which animals self-administer food and ethanol. Animals are singly-housed and to continuously measure their alcohol intakes which would be untenable using a typical primate restraint chair system.
5. Purpose and value of study: Little is known about factors that render some individuals more susceptible to becoming alcoholics than others. There is a growing appreciation of the influence of personality--particularly an individual's reaction to positive and negative experiences--on sensitivity to abused drugs. These studies examine how reactivity to environmental stimuli influences sensitivity to alcohol, and whether differences in reaction to environmental enrichment can differentially alter drinking patterns. The model of alcohol drinking used for these studies is a well-studied, well-validated model of human alcohol drinking. Data obtained from these studies will provide information regarding vulnerability to the effects of alcohol, and will suggest new approaches for treating abuse.

- 1. Species (Common name):** Monkey
2. Number of animals: 6
3. Exception: Singly Housed Primates
4. Description: There are published data suggesting that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. These studies assess physiological and behavior measurements related to dopamine D2 receptors, and social housing can reasonably be expected to confound our findings.
5. Purpose and value of study: These studies will help characterize which of cocaine's effects on the brain are responsible for driving cocaine use in addicts. A better understanding of these factors may lead to new and better treatment strategies for cocaine addiction, for which there are currently no FDA-approved drug treatments.

- 1. Species (Common name):** Monkey
2. Number of animals: 10
3. Exceptions: Singly Housed Primates
4. Descriptions: In order to measure fractional cholesterol absorption and fecal neutral sterol excretion, animals will be individually housed for a period of 3 days on four different occasions to collect feces from each animal. With the exception of these times, animals will be socially housed.
5. Purpose and Value of study: This project investigates the role of liver X receptor (LXR) in the development of atherosclerosis. LXR agonists are a class of drugs that have been shown in mice to increase HDL-C and decrease atherosclerosis. However, LXR agonist treatment of hepatocytes from humans but not mice causes an increase in the protein Idol that induces the degradation of the LDL receptor. Therefore, giving humans LXR agonists may not decrease atherosclerosis and CHD since the increase in HDL-C could be offset by an increase in LDL-C. To improve our understanding of how LXR agonists may

impact CHD in humans, we propose to give LXR agonist to monkeys, an animal model that should react to the drug in manner similar to that of humans. Based upon studies in human hepatocytes, we hypothesize that LXR agonist treatment of cynomolgus monkeys will cause an increase in LDL-C due to the induction of Idol in the liver.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 9
- 3. Exceptions:** Singly Housed Primates
- 4. Descriptions:** In order to measure fractional cholesterol absorption and fecal neutral sterol excretion, it was necessary to house monkeys singly. In order to perform individual animal daily fecal collections and decrease variability on plasma cholesterol concentrations in movement of animals back and forth from group vs single housing, it was necessary to house the monkeys in individual cages during the study. However, the animals were within sight and sound of other monkeys at all times.
- 5. Purpose and value of study:** The goal of this study was to determine if a compound made by Amgen Inc. would increase HDL cholesterol concentrations and increase reverse cholesterol transport in nine adult male cynomolgus monkeys using a crossover design.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 9
- 3. Exceptions:** Singly Housed Primates
- 4. Descriptions:** To minimize variability in plasma cholesterol concentrations due to moving monkeys to and from single housing and the need to singly house the animals for daily fecal collections.
- 5. Purpose and value of study:** The goal of this study was to determine if an ACAT2 inhibitor would change plasma and liver cholesterol concentrations in nonhuman primates.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 21
- 3. Exception:** Singly Housed Primates
- 4. Description:** The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
- 5. Purpose and value of study:** Many millions of Americans suffer from chronic pain, in part due the failure of current medications. In this work, novel pain medications are compared to current treatments for efficacy in models of mild pain (without any tissue damage), such as tail withdrawal from hot water, as well as the formation of common side-effects, itch, constipation, respiratory depression or drug abuse liability.

1. Species (Common name): Monkey
2. Number of animals: 12
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: Pruritus (itch sensation) is a symptom of many clinical disorders and drug treatments that afflicts a large population of humans. However, little effort has been made to improve our understanding of the receptor mechanisms of itch and potential antipruritics. The purpose of this research is to establish experimental itch models in primates, determine and compare the effectiveness of different drugs as potential antipruritics in a broader context, and facilitate the future development of effective antipruritics.

1. Species (Common name): Monkey
2. Number of animals: 3
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: The main goal of the proposed study is to test novel compounds in monkeys to see whether or not they can produce pain relief that is comparable to clinically available pain relievers, or analgesics. If this goal can be accomplished, there is an exciting potential to improve current clinical methods of pain management.

1. Species (Common name): Monkey
2. Number of animals: 4
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained as part of transport. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: These studies will investigate whether newly developed analgesics produce any unwanted side effects in nonhuman primate models with translational values. The research and development of such analgesics with fewer side effects will significantly advance human medicine.

- 1. Species (Common name):** Sheep
- 2. Number of animals:** 42
- 3. Exception:** Cage Size
- 4. Description:** For each protocol listed, sheep (*Ovis Aries*) are used in studies of endocrine, renal and/or cardiovascular regulation, and are housed in metabolism carts below minimum square footage for up to twenty one days. Data show movement of animals in and out of the carts on a daily basis would adversely influence the hormones measured in these experiments.
- 3. Exception:** Multiple Major Survival Surgery
- 4. Description:** Project 1 - 1st surgery - placement of bladder catheter. 2nd surgery - Left nephrectomy and placement of renal artery catheter. Project 2 - 1st surgery - Placement of bladder catheter at 6 months of age. 2nd surgery - placement of bladder catheter at 12 months of age. Project 3 (newborn) renal nerve electrodes at 2 weeks of age. 2nd surgery (newborn) - placement of fourth ventricular catheter at 2 weeks of age. Project 3 (adult) - 1st surgery - Placement of renal nerve electrodes at 6 month 2nd surgery - Placement of fourth ventricular catheter at 6 months of age. 3rd surgery - placement of renal nerve electrodes at 12 months. 4th surgery - placement of fourth ventricular catheter at 12 months of age.
- 5. Purpose and value of study:** These studies will advance our understanding of factors relating to the health and survival of newborn infants.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 14
- 3. Exception:** Watering
- 4. Description:** Access to fluids is timed so that monkeys are thirsty during operant testing in which sips of fluid serve as the reward. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Health and hydration are assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (i.e., decreased urine production, dry feces, anorexia, changes in skin elasticity, and changes in hematocrit) or a reduction of body weight.
- 3. Exception:** Multiple Major Survival Surgery
- 4. Description:** The two major surgeries are for placement of craniotomy access cylinders to record and compare electrical brain activity from the different sites. The results of electrophysiological studies after the first surgery indicate the additional brain area that must be recorded for complete neural circuit analysis. Interval between the surgeries is typically >1 year.
- 5. Purpose and value of study:** Impairment of human cognition can result from head injury, stroke, disease or as a consequence of drug use/abuse. While noninvasive recording of EEG and imaging can reveal many features of overall brain activity, they cannot isolate activity within single brain areas, provide information regarding the activity of single neurons, nor allow determination of the neural circuit responses to changes in cognitive ability or demand. These studies utilize implanted electrodes in two or more connected brain areas (i.e. multiple surgical sites) to investigate single and multiple neuron correlates with memory and behaviors involving memory. Behavioral reinforcement for these tasks requires liquid reward, thus animals are maintained with controlled fluid intake to maintain motivation within the tasks.

1. Species (Common name): Monkey
2. Number of animals: 5
3. Exception: Fluid regulation
4. Description: The fluid scheduling practices are based on the institutional fluid regulation policy as set forth by the animal care and use committee. Access to fluids is scheduled such that animals' first fluid intake of the day occurs during a training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement based on a baseline (pre-study) weight. If adequate fluid intake is not reached during testing, the subjects are supplemented to a minimum physiological standard (based on weight). Animal status is assessed by both research and veterinary personnel daily. Study animals are weighed with every experimental session (typically 5 x / week) and fluid regulation is suspended if weight loss exceeds a baseline criterion and/or the animal displays any sign of dehydration (e.g., decreased urine production, changes in skin elasticity).

3. Exception: Multiple Major Survival Surgery
4. Description: Up to two major surgeries are possible for a subset of animals. Both entail the implantation of a recording cylinder that allows for assessing the activity of single neurons within two visuomotor areas of the brain.
5. Purpose and value of study: The goal of our research is to understand how the brain forms decisions to guide choices by converting information about objects or events in the environment (e.g., the phone rings) into the brain activity that produce actions (e.g., pick up the phone). To do so, we study vision, audition (sensory), and eye movements (action) in monkeys trained to perform a variety of behavioral tasks. To understand how the brain's activity relates to the visual stimuli and to the eye movements needed to look at these stimuli, brain activity is measured while an animal is performing a behavioral task.. One can appreciate this by considering the complexity of the behavioral impairments associated with disorders like Parkinson's disease, Huntington's chorea (a movement disorder not unlike Parkinson's Disease), or parietal neglect (the failure to sense or tendency to ignore certain parts of the sensory world).

1. Species (Common name): Monkey
2. Number of animals: 2
3. Exception: Multiple Major Survival Surgeries
4. Description: Up to two major surgeries are possible for a subset of animals. Both entail the implantation of a recording cylinder that allows for assessing the activity of single neurons within either a midbrain or cortical territory.
3. Exception: Water
4. Description: The fluid scheduling practices are based on the institutional fluid regulation policy as set forth by the animal care and use committee. Access to fluids is scheduled such that animals' first fluid intake of the day occurs during a training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement based on a baseline (pre-study) weight. . If adequate fluid intake is not reached during testing, the subjects are supplemented to a minimum physiological standard (based on weight). Animal status is assessed by both research and

veterinary personnel daily. Study animals are weighed with every experimental session (typically 5 x/week) and fluid regulation is suspended if weight loss exceeds a baseline criterion and/or the animal displays any sign of dehydration (e.g., decreased urine production, changes in skin elasticity).

5. Purpose and value of study: The purpose of this study is to determine how the brain combines visual and auditory information from the environment to enhance decision-making and attention in complex environments with implications for understanding a variety of sensorimotor disturbances.

1. Species (Common name): Monkey

2. Number of animals: 6

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

3. Exception: Multiple Major Survival Surgeries

4. Description: Multiple survival surgeries to implant recording cylinders may be required in this study if the first implant fails or if recording from a second brain region is needed. No more than 3 major surgeries will be conducted per animal.

5. Purpose and value of study: The experiments will help uncover how learning changes the brain. Cognitive training has emerged in the past few years as a means of restoring function lost after traumatic brain injury and to ameliorate the effects of genetic disorders such as Alzheimer's disease and schizophrenia. Our results will shed light on the underlying neural circuit changes that occur following cognitive training, and they are expected to offer insights for the design of better treatment strategies for these conditions.

1. Species (Common name): Monkey

2. Number of animals: 6

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

3. Exception: Multiple Major Survival Surgeries

4. Description: Multiple survival surgeries are required in this study for the implantation of recording cylinders to gain access for neurophysiological recordings to more than one brain area and/or both brain hemispheres. No more than 3 major surgeries will be conducted per animal.

5. Purpose and value of study: The results will offer insights into how the brain performs visual perception, and they will contribute to the body of knowledge used to design better treatment strategies for disorders of learning and memory.

1. Species (Common name): Monkey
2. Number of animals: 4
3. Exceptions: Multiple Major Survival Surgeries
4. Descriptions: 1st major Surgery: Implantation of recording cylinder over the prefrontal cortex to allow microelectrode recordings. 2nd Major Surgery: Implantation of recording cylinder over the parietal cortex to allow microelectrode recordings. 3rd Major Surgery: Implantation of recording cylinder over the prefrontal or parietal cortex of the other hemisphere.

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

5. Purpose and value of study: This project investigates the changes of prefrontal cortical physiology and functional connectivity that occur after puberty. A non-human primate model will be used which will allow us to conduct neurophysiological recordings in the prefrontal cortex of sexually immature and adult animals. A better understanding of the maturation of executive brain function will be relevant for a host of developmental conditions, including autism and schizophrenia.

1. Species (Common name): Cat
2. Number of animals: 20
3. Exception: Multiple Major Survival Surgeries
4. Description: First major surgery: implantation of muscimol-infused polymer slices into the cerebral cortex of the brain. The muscimol is released slowly into the brain tissue over a 3-4 week period. Second major surgery: a second implantation of muscimol-infused polymer slices when the first set is depleted of the muscimol. The third surgery is the implantation of a recording well/headholding device. There is anywhere from a 3-month-long to a 9-month-long interval between the second and third surgeries.

5. Purpose and value of study: The purposes of the study are (1) to determine if the cerebral cortex is the source of inputs to the midbrain (superior colliculus) by temporarily deactivating the cortex during the "critical period" of maturation, and (2) if and how the adult midbrain compensates for this loss of early cortical connections. The data obtained should give us insights into the development of the brain circuits that control our ability to merge information from multiple senses to form a coherent picture of the world. Such insights can be used in developing therapies to deal with brain abnormalities involved in such disorders as Dyslexia and other Sensory Processing Disorders.

1. **Species (Common name):** Sheep
2. **Number of animals:** 16
3. **Exceptions:** Multiple Major Survival Surgeries
4. **Descriptions:** 1st Major Surgery: Column run for blood circulation and femoral biopsy surgery to isolate endothelial progenitor cells and smooth muscle cells, respectively. 2nd Major Surgery: Implantation of a cell-seeded vascular scaffold in a sheep arterial interposition model
5. **Purpose and value of study:** This project investigates the clinical feasibility of tissue-engineered vascular grafts that uses vascular cells and a novel scaffold.

1. **Species (Common name):** Monkey
2. **Number of animals:** 10
3. **Exceptions:** Multiple Major Survival Surgeries
4. **Descriptions:** 1st major Surgery: Liver and intestinal biopsies by laparotomy. 2nd major Surgery: Liver and intestinal biopsies by laparotomy.
5. **Purpose and value of study:** This study aims to document the effects of dietary fructose on health in a relevant non-human primate model. By understanding whether fructose (more than other carbohydrates) causes liver fat to be accumulated, and uncovering the mechanism which contributes to this problem, we can advise on specific therapies for treating people with excess liver fat or, possibly advocate for changes in food production depending on the results of the study. The value of the study rests on the close gastrointestinal physiology shared between monkeys and humans, coupled with the ability to control dietary intakes such that the specific effects of fructose, uncomplicated by obesity, can be evaluated.

1. **Species (Common name):** Rabbit
2. **Number of animals:** 5
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 2 survival surgeries. 1st Surgery: 2 jejunal biopsies were taken and 1cm long strips of smooth muscle from the anal sphincter were removed. Second surgery occurred 6 weeks later, whereby bioengineered autologous tissue was implanted in IAS area.
5. **Purpose and value of Study:** This project is to test in a large animal model, a new therapeutic approach to treat Fecal incontinence. The objective is to generate data that bioengineering and implanting bioengineered intrinsically innervated IAS tissue would work.

1. **Species (Common name):** Monkey
2. **Number of animals:** 16
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 1st Major Surgery: Laparotomy to collect luteal tissue from the ovary at baseline. 2nd Major Surgery: Laparotomy to collect luteal tissue from the ovary post-treatment (following 12 months on diet). 3rd Major Surgery: Collection of oocytes following superovulation (post-treatment).
5. **Purpose and value of study:** The specific hypothesis to be tested in this study is that obesity negatively affects luteal function in female primates. Pilot data indicate that gene expression data can be collected successfully from luteal tissue from monkeys. The

study represented here will build upon the pilot data to investigate the relationship between obesity, reproductive hormones and luteal function in a larger group of monkeys.

- 1. Species (Common name):** Cat
- 2. Number of animals:** 2
- 3. Exception:** Multiple Major Survival Surgeries
- 4. Description:** 1st Major Surgery: (i) Chronic visual cortex ablation procedures; (ii) Instrumentation for recording. 2nd Major Surgery: (i) Implantation of instrumentation for chronic anesthetized physiological preparations; (ii) In select animals, the second surgery is done to place a second lesion in the associational regions of cortex once behavioral testing and rehabilitation is complete. These animals may undergo a third surgery for instrumentation. (iii) In select animals, the second surgery is done to facilitate a neurotoxic dopaminergic deafferentation of associational cortex. 3rd Major Surgery: (i) Implantation of instrumentation for chronic anesthetized physiological preparations: Following behavioral testing and a second cortical lesion, animals are instrumented with a head-holding/recording under isoflurane anesthesia.
- 5. Purpose and value of study:** Damage to regions of the cortex in humans as a consequence of stroke or traumatic brain injury can produce a type of visual deficit called the 'parietal neglect syndrome', where individuals do not notice or make eye movements toward objects in half of their visual world. We intend to induce similar deficits in experimental animals by making large visual cortex lesions in order to gain insights into why this disorder occurs and to determine if such lesioned animals can be rehabilitated using behavioral training techniques to regain some of the visuomotor capabilities that are 'lost' following brain damage.

- 1. Species (Common name):** Swine
- 2. Number of animals:** 12
- 3. Exception:** Multiple Major Survival Surgeries:
- 4. Description:** 1st major Surgery: a 17 mm diameter craniotomy (hole) is made in the skull exposing the brain. A controlled cortical impact (CCI) injury is made in the right frontal lobe and a vacuum dressing. Controlled vacuum is applied to a sub-set of animals. 2nd Major Surgery: the vacuum dressing is removed and the incision site sutured closed. The animal is allowed to recover for later evaluation by MR imaging.
- 5. Purpose and value of study:** Injury to brains are often progressive, they worsen over time due to swelling of the brain within the limited space inside the skull. Previous studies in our lab have shown that application of a controlled vacuum to other progressive injuries (burns, spinal cord, etc.) prevents or greatly decreases the severity of injury. This study examines the effect of applying a controlled vacuum to a brain that has been damaged with a contusion injury.

- 1. Species (Common name):** Swine (pig)
- 2. Number of animals:** 28
- 3. Exception:** Multiple Major Survival Surgeries
- 4. Description:** First major surgery: craniotomy to expose left side of brain. The brain is reflected and 1-2 branches of the middle cerebral artery are occluded. A vacuum dressing is placed and vacuum applied to the area of ischemia. The second major surgery: The incision is opened and the vacuum dressing removed, and the incision is re-sutured closed.

1. **Species (Common name):** Swine
2. **Number of animals:** 15
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 1st Major Surgery: Unilateral nephrectomy for primary renal cell harvest. 2nd Major Surgery: Implantations: Bioengineered scaffolds.
5. **Purpose and value of study:** The purpose of this study is to develop a procedure to transplant kidneys in animals that have been stripped of their native animal cells and replaced with human cells. The purpose of the present study is to demonstrate that: 1] kidneys taken from pigs can be successfully placed back in pigs; and 2] blood flow within the transplanted kidney can be maintained after implantation.

1. **Species (Common name):** Swine
2. **Number of animals:** 4
3. **Exception:** Multiple Major Surgery
4. **Description:** 1st major surgery: Nephrectomy 2nd major surgery: Implantation after nephrectomy The animals in the study groups of this protocol will need to undergo a major surgery for nephrectomy to harvest one of their kidneys to use as cell donor for the seeding of the acellular scaffold. There is an estimated 2-4 weeks between the two surgeries.
5. **Purpose and value of study:** It is well known that the number of patients needing an organ transplant far exceeds the number of donor organs available. We have developed a procedure for creating transplantable organs (e.g. kidneys) from animal organs that have been stripped of their native animal cells and replaced with recipient cells. The purpose of the present study is to demonstrate that: 1) Kidneys taken from pigs can be successfully placed back in pigs after these kidneys have been stripped of their cells, and 2) blood flow within the transplanted kidney can be maintained after implantation. This research will give us a better idea of whether pig derived kidney scaffolds with cell seeding can be implanted without complications or rejection by the body's defense (immune) system.

1. **Species (Common name):** Sheep
2. **Number of animals:** 4
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Thoracotomy approach but does not enter pleural cavity- Chamber placement 2nd major surgery: Bone graft harvest /mandibular defect. This protocol will require 2 thoracotomies 9 weeks apart. The first is for bone harvest and chamber placement. The second is required for chamber removal and placement in the mandibular defect.
5. **Purpose and value of study:** Large bone defects of the face remain a clinical challenge to repair. Vascularized flaps (sections of bone with attached artery and vein) are optimal for large defects as the transferred vessels provide the bone with consistent supply of oxygen and nutrients for survival of the whole section of bone. However, there are few donor sites for vascularized flaps in the body. We propose a study where a molded chamber is used to generate bone or preosteogenic tissue (tissue that has potential to become bone) on the ribs which can be transferred to the defect. We

hypothesize that cell-free chamber containing the proper materials, presents a simple platform technology which can be translated to the clinic more readily than those with cellular components.

1. **Species (Common name):** Cat
2. **Number of animals:** 5
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Surgical Revision to Reposition Corneal Graft; the 2nd major surgery: DSAEK with implantation of human corneal tissue- Second Surgery will be one week later. This staggering of the membrane destruction and the implant procedures allows the study to obtain pachymetry results with the new instrument and evaluate the statistics of quantitative data obtained during in-life evaluation of animals receiving a unilateral DSAEK.
5. **Purpose and value of study:** Corneal blindness is a major cause of blindness in the world today. The cornea is the transparent front part of the eye, and unfortunately it cannot rebuild itself. Damage leads to loss of transparency and vision. This condition is treated by various types of corneal transplantation, but these approaches include several potential complications that often result in poor vision. A new method of cultivating human corneal endothelial cells has been developed that may greatly reduce the disadvantages of current transplant methods.

1. **Species (Common name):** Swine
2. **Number of animals:** 18
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Hepatectomy: The animals in the study groups of this protocol will need to undergo a major surgery for a partial hepatectomy for use as cell donor for the seeding of the acellular scaffold. 2nd major surgery: Implantations: Bioengineered scaffolds: The animals will have a transplantation of the scaffold. after the hepatectomy procedure. There is an interval of 2-4 weeks between surgeries.
5. **Purpose and value of study:** Currently, there are many more patients awaiting a liver transplant than the number of organs available. Bio-engineered livers using small amounts of a patient's own healthy cells represent one possible solution to this problem. In the proposed study, engineered liver made with pig tissue will be surgically transplanted in pigs, and adequate blood flow and tissue function will be assessed.

1. **Species (Common name):** Rabbit
2. **Number of animals:** 22
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Partial hysterectomy; 2nd major surgery: Transplantation of Bioengineered Uterus Scaffold ; 3rd major surgery: Cesarean Section: One major surgery is required in order to obtain the cells needed for seeding of the scaffold. The second surgery is necessary in order to transplant the uterus. There will be at least four weeks between surgeries. A Cesarean section is necessary in order to

assess if the animal have implanted in our transplanted portion of the uterus or in the areas surrounding it. This is a functional endpoint of the study.

5. Purpose and value of study: The CDC reports that 5 of every 1000 women in the U.S. have had a hysterectomy, surgical removal of the uterus. We propose that a uterus substitute organ can be grown in the laboratory using cells from the patient that has been seeded on synthetic mesh (scaffold) material. The ultimate goal of this project is find a method to repair uterine tissue and return reproductive health for women.

- 1. Species (Common name):** Chinchillas
- 2. Number of animals:** 10
- 3. Exception:** Pain E
- 4. Description:** Transbullar inoculation of the animals will result in the development of otitis media.
- 5. Purpose and value of study:** Streptococcus pneumoniae is a human pathogen that is the main cause of community-acquired pneumoniae and meningitis in the pediatric population, and a leading cause of middle ear infection. Middle ear infection is one of the leading causes of illness in children with 50-85% of children aged 3 having had the disease. Thus, it is of great importance to continue to research novel treatment alternatives. This pilot study is to test the effectiveness of a novel eardrop formulation for the treatment of S. pneumoniae middle ear infection.
- 6. Justification:** The use of analgesics during infection and experimental treatment would alter the host response to the infection and the course of disease. In this case, the true therapeutic nature of the test agent would be impossible to interpret. Frequent monitoring for more than mild discomfort was carefully monitored.

- 1. Species (Common name):** Prairie Vole
- 2. Number of animals:** 8
- 3. Exception:** Pain E
- 4. Description:** **Partial spinal nerve ligation.** Subject is anesthetized while the L5 spinal nerve is ligated to induce a model of increase sensitivity to touch.
- 5. Purpose and value of study:** Recent research indicates that a person's social support system - positive or negative - influences the people's sensitivity to pain, their response to pain treatment, and the development of chronic pain. Humans are relatively unique among mammals in that they form long-lasting pair bonds between males and females, and the males contribute to the rearing of offspring. Most preclinical pain research has been performed in rodents, typically mice and rats, which do not form such pair bonds. Prairie voles do pair bond and display human-like social behaviors. In these studies, we will examine how pair-bonding in prairie voles influences pain sensitivity. The goal is to develop an animal model that is capable of showing how social interactions affect pain in people, to understand the underlying brain mechanisms, and to find new treatment modalities.
- 6. Justification:** The model of pain used here produces allodynia, or elevated sensitivity to touch, rather than actual pain. It is believed that this model is only

moderately discomforting or painful and only when touch is applied to the affected limb. Except during the brief period of touch sensitivity testing, the animal avoids contact with the limb and otherwise behaves normally. The effects of pain on social behavior and the effects of social pair bond formation on pain sensitivity were assessed in this study; therefore, no analgesics were given during pain sensitivity testing.

Column E Explanation

This form is intended as an aid to completing the Column E explanation. It is not an official form and its use is voluntary. Names, addresses, protocols, veterinary care programs, and the like, are not required as part of an explanation. A Column E explanation must be written so as to be understood by lay persons as well as scientists.

1. Registration Number: 55-R-0127
2. Number 490 of animals used in this study.
3. Species (common name) Guinea pigs of animals used in the study.
4. Explain the procedure producing pain and/or distress.

Tetanus potency - To quantitate the potency of Tetanus Immune Globulin (Human) by using neutralization methodology.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see Item 6 below)

This testing is mandated by Product License Testing requirements. Administration of anesthetic, analgesic or tranquilizer drugs would interfere with the outcome of the testing.

6. What, if any, federal regulations require this procedure? Cite the agency, the code of Federal Regulations (CFR) title number and the specific section number (e.g., APHIS, 9 CFR 113.102):

Agency FDA CFR 21 CFR 610.10

- 1. Species (Common name):** Cat
2. Number of animals: 12
3. Exception: Lighting
4. Description: All animals are raised from birth to adulthood in total darkness.
5. Purpose and value of study: These studies examine the role of visual experience on the development of the multisensory processes by which the brain synthesizes information from different senses, like vision and hearing, to shape the way we perceive the world. By manipulating visual input during development we learn how the nervous system compensates. This work will be translated into clinical treatments, like prosthetic devices, to improve the lives of those with congenital or early-acquired sensory deficits.

- 1. Species (Common name):** Monkey
2. Number of animals: 37
3. Exception: Singly Housed Primates
4. Description: Each housing unit is equipped with an operant panel from which animals self-administer food and cocaine. Cocaine is provided via a tether that encloses a chronic, indwelling, intravenous catheter. Animals are singly-housed to continuously measure their intake and to deliver potential treatment drugs over extended periods of time which provides enhanced translational value.
5. Purpose and value of study: There are currently no FDA-approved medications for the treatment of cocaine addiction. These studies systematically investigate current off-label medications or new medications for cocaine addiction. These studies should provide important information relevant to clinicians.

- 1. Species (Common name):** Monkey
2. Number of animals: 24
3. Exception: Singly Housed Primates
4. Description: There are published data suggesting that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. These studies assess physiological and behavior measurements related to dopamine D₃ receptors, and social housing can reasonably be expected to confound our findings.
5. Purpose and value of study: Dopamine is a chemical in the brain that has been shown to affect drug addiction. These studies examine D₃ compounds that activate the dopamine D₃ receptor which has been identified as an important target for new medications for addiction.

- 1. Species (Common name):** Monkey
2. Number of animals: 24
3. Exception: Singly Housed Primates
4. Description: There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. The present studies assess physiological and behavior measurements related to the dopamine system using PET imaging, CSF collection, and behavioral pharmacology techniques in monkeys that have been prenatally exposed to

cocaine or control animals. If these monkeys were social housed, it would confound our findings.

5. Purpose and value of study: The long-term neurological and behavioral consequences of this early drug exposure and whether this early experience makes young adults more vulnerable to cocaine abuse are unknown. These studies are aimed at understanding the neurobiological and behavioral consequences of prenatal cocaine exposure in adult rhesus monkeys.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 27
- 3. Exception:** Singly Housed Primates
- 4. Description:** There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. Aims 1 and 3 in the present studies assess physiological and behavioral measurements related to the dopamine system using PET imaging, CSF collection, and the acquisition of cocaine self-administration in female monkeys. Monkeys are individually housed upon arrival to the laboratory while we collect these measures. The animals are then socially housed and the measures are redetermined and studied as a function of social rank.
- 5. Purpose and value of study:** We can examine sex differences, comparing the effects we previously published in male monkeys, to those found in this study using female monkeys. Human clinical data suggests that women become addicted sooner than men and experience a harder time remaining abstinent. These studies should provide important information with regards to sex differences in measures associated with vulnerability and abuse of drugs

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 8
- 3. Exception:** Singly Housed Primates
- 4. Description:** There are published data from this laboratory showing that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs. Thus, it is imperative that all animals in the study have identical housing conditions. It would be a huge confound if we were able to pair house some, but not all animals contained in the same study. The present studies assess physiological and behavior measurements related to the nicotinic and dopaminergic systems using CSF collection, and behavioral pharmacology techniques.
- 5. Purpose and value of study:** Cigarette smoking resulting in nicotine dependence represents the most prevalent form of chemical dependence in the United States. Despite several FDA-approved drug treatments to combat nicotine dependence, relapse rates remain high. One of the most successful drug treatments for nicotine dependence, Chantix® has a success rate that is less than ~40%. Thus, there is a need for additional research with nicotine. While nicotine self-administration has been readily established in rodents, few investigators have successfully reported nicotine self-administration in nonhuman primate models. Once established we will evaluate current FDA-approved treatments and new compounds in our monkey model. We will also use these studies to better understand how nicotine may interact with the effects of cocaine and methamphetamine.

- 1. Species (Common name):** Monkey
2. Number of animals: 6
3. Exception: Singly Housed Primates
4. Description: Each housing unit is equipped with an operant panel from which animals self-administer food and ethanol. Animals are singly-housed and to continuously measure their alcohol intakes which would be untenable using a typical primate restraint chair system.
5. Purpose and value of study: Little is known about factors that render some individuals more susceptible to becoming alcoholics than others. There is a growing appreciation of the influence of personality--particularly an individual's reaction to positive and negative experiences--on sensitivity to abused drugs. These studies examine how reactivity to environmental stimuli influences sensitivity to alcohol, and whether differences in reaction to environmental enrichment can differentially alter drinking patterns. The model of alcohol drinking used for these studies is a well-studied, well-validated model of human alcohol drinking. Data obtained from these studies will provide information regarding vulnerability to the effects of alcohol, and will suggest new approaches for treating abuse.

- 1. Species (Common name):** Monkey
2. Number of animals: 6
3. Exception: Singly Housed Primates
4. Description: There are published data suggesting that social stress affects dopaminergic systems in the brain as well as the reinforcing effects of drugs, like cocaine. These studies assess physiological and behavior measurements related to dopamine D2 receptors, and social housing can reasonably be expected to confound our findings.
5. Purpose and value of study: These studies will help characterize which of cocaine's effects on the brain are responsible for driving cocaine use in addicts. A better understanding of these factors may lead to new and better treatment strategies for cocaine addiction, for which there are currently no FDA-approved drug treatments.

- 1. Species (Common name):** Monkey
2. Number of animals: 10
3. Exceptions: Singly Housed Primates
4. Descriptions: In order to measure fractional cholesterol absorption and fecal neutral sterol excretion, animals will be individually housed for a period of 3 days on four different occasions to collect feces from each animal. With the exception of these times, animals will be socially housed.
5. Purpose and Value of study: This project investigates the role of liver X receptor (LXR) in the development of atherosclerosis. LXR agonists are a class of drugs that have been shown in mice to increase HDL-C and decrease atherosclerosis. However, LXR agonist treatment of hepatocytes from humans but not mice causes an increase in the protein Idol that induces the degradation of the LDL receptor. Therefore, giving humans LXR agonists may not decrease atherosclerosis and CHD since the increase in HDL-C could be offset by an increase in LDL-C. To improve our understanding of how LXR agonists may

impact CHD in humans, we propose to give LXR agonist to monkeys, an animal model that should react to the drug in manner similar to that of humans. Based upon studies in human hepatocytes, we hypothesize that LXR agonist treatment of cynomolgus monkeys will cause an increase in LDL-C due to the induction of Idol in the liver.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 9
- 3. Exceptions:** Singly Housed Primates
- 4. Descriptions:** In order to measure fractional cholesterol absorption and fecal neutral sterol excretion, it was necessary to house monkeys singly. In order to perform individual animal daily fecal collections and decrease variability on plasma cholesterol concentrations in movement of animals back and forth from group vs single housing, it was necessary to house the monkeys in individual cages during the study. However, the animals were within sight and sound of other monkeys at all times.
- 5. Purpose and value of study:** The goal of this study was to determine if a compound made by Amgen Inc. would increase HDL cholesterol concentrations and increase reverse cholesterol transport in nine adult male cynomolgus monkeys using a crossover design.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 9
- 3. Exceptions:** Singly Housed Primates
- 4. Descriptions:** To minimize variability in plasma cholesterol concentrations due to moving monkeys to and from single housing and the need to singly house the animals for daily fecal collections.
- 5. Purpose and value of study:** The goal of this study was to determine if an ACAT2 inhibitor would change plasma and liver cholesterol concentrations in nonhuman primates.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 21
- 3. Exception:** Singly Housed Primates
- 4. Description:** The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
- 5. Purpose and value of study:** Many millions of Americans suffer from chronic pain, in part due the failure of current medications. In this work, novel pain medications are compared to current treatments for efficacy in models of mild pain (without any tissue damage), such as tail withdrawal from hot water, as well as the formation of common side-effects, itch, constipation, respiratory depression or drug abuse liability.

1. Species (Common name): Monkey
2. Number of animals: 12
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: Pruritus (itch sensation) is a symptom of many clinical disorders and drug treatments that afflicts a large population of humans. However, little effort has been made to improve our understanding of the receptor mechanisms of itch and potential antipruritics. The purpose of this research is to establish experimental itch models in primates, determine and compare the effectiveness of different drugs as potential antipruritics in a broader context, and facilitate the future development of effective antipruritics.

1. Species (Common name): Monkey
2. Number of animals: 3
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: The main goal of the proposed study is to test novel compounds in monkeys to see whether or not they can produce pain relief that is comparable to clinically available pain relievers, or analgesics. If this goal can be accomplished, there is an exciting potential to improve current clinical methods of pain management.

1. Species (Common name): Monkey
2. Number of animals: 4
3. Exception: Singly Housed Primates
4. Description: The PI recently relocated to Wake Forest. All animals on this protocol were singly housed at the previous U.S. school, where animals were leash trained as part of transport. Animals that use a leash cannot be social housed because of strangulation risk. Efforts to retrain these animals to other means of transport and to find appropriate social pairs are ongoing.
5. Purpose and value of study: These studies will investigate whether newly developed analgesics produce any unwanted side effects in nonhuman primate models with translational values. The research and development of such analgesics with fewer side effects will significantly advance human medicine.

- 1. Species (Common name):** Sheep
- 2. Number of animals:** 42
- 3. Exception:** Cage Size
- 4. Description:** For each protocol listed, sheep (*Ovis Aries*) are used in studies of endocrine, renal and/or cardiovascular regulation, and are housed in metabolism carts below minimum square footage for up to twenty one days. Data show movement of animals in and out of the carts on a daily basis would adversely influence the hormones measured in these experiments.
- 3. Exception:** Multiple Major Survival Surgery
- 4. Description:** Project 1 - 1st surgery - placement of bladder catheter. 2nd surgery - Left nephrectomy and placement of renal artery catheter. Project 2 - 1st surgery - Placement of bladder catheter at 6 months of age. 2nd surgery - placement of bladder catheter at 12 months of age. Project 3 (newborn) renal nerve electrodes at 2 weeks of age. 2nd surgery (newborn) - placement of fourth ventricular catheter at 2 weeks of age. Project 3 (adult) - 1st surgery - Placement of renal nerve electrodes at 6 month 2nd surgery - Placement of fourth ventricular catheter at 6 months of age. 3rd surgery - placement of renal nerve electrodes at 12 months. 4th surgery - placement of fourth ventricular catheter at 12 months of age.
- 5. Purpose and value of study:** These studies will advance our understanding of factors relating to the health and survival of newborn infants.

- 1. Species (Common name):** Monkey
- 2. Number of animals:** 14
- 3. Exception:** Watering
- 4. Description:** Access to fluids is timed so that monkeys are thirsty during operant testing in which sips of fluid serve as the reward. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Health and hydration are assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (i.e., decreased urine production, dry feces, anorexia, changes in skin elasticity, and changes in hematocrit) or a reduction of body weight.
- 3. Exception:** Multiple Major Survival Surgery
- 4. Description:** The two major surgeries are for placement of craniotomy access cylinders to record and compare electrical brain activity from the different sites. The results of electrophysiological studies after the first surgery indicate the additional brain area that must be recorded for complete neural circuit analysis. Interval between the surgeries is typically >1 year.
- 5. Purpose and value of study:** Impairment of human cognition can result from head injury, stroke, disease or as a consequence of drug use/abuse. While noninvasive recording of EEG and imaging can reveal many features of overall brain activity, they cannot isolate activity within single brain areas, provide information regarding the activity of single neurons, nor allow determination of the neural circuit responses to changes in cognitive ability or demand. These studies utilize implanted electrodes in two or more connected brain areas (i.e. multiple surgical sites) to investigate single and multiple neuron correlates with memory and behaviors involving memory. Behavioral reinforcement for these tasks requires liquid reward, thus animals are maintained with controlled fluid intake to maintain motivation within the tasks.

1. Species (Common name): Monkey
2. Number of animals: 5
3. Exception: Fluid regulation
4. Description: The fluid scheduling practices are based on the institutional fluid regulation policy as set forth by the animal care and use committee. Access to fluids is scheduled such that animals' first fluid intake of the day occurs during a training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement based on a baseline (pre-study) weight. If adequate fluid intake is not reached during testing, the subjects are supplemented to a minimum physiological standard (based on weight). Animal status is assessed by both research and veterinary personnel daily. Study animals are weighed with every experimental session (typically 5 x / week) and fluid regulation is suspended if weight loss exceeds a baseline criterion and/or the animal displays any sign of dehydration (e.g., decreased urine production, changes in skin elasticity).

3. Exception: Multiple Major Survival Surgery
4. Description: Up to two major surgeries are possible for a subset of animals. Both entail the implantation of a recording cylinder that allows for assessing the activity of single neurons within two visuomotor areas of the brain.
5. Purpose and value of study: The goal of our research is to understand how the brain forms decisions to guide choices by converting information about objects or events in the environment (e.g., the phone rings) into the brain activity that produce actions (e.g., pick up the phone). To do so, we study vision, audition (sensory), and eye movements (action) in monkeys trained to perform a variety of behavioral tasks. To understand how the brain's activity relates to the visual stimuli and to the eye movements needed to look at these stimuli, brain activity is measured while an animal is performing a behavioral task.. One can appreciate this by considering the complexity of the behavioral impairments associated with disorders like Parkinson's disease, Huntington's chorea (a movement disorder not unlike Parkinson's Disease), or parietal neglect (the failure to sense or tendency to ignore certain parts of the sensory world).

1. Species (Common name): Monkey
2. Number of animals: 2
3. Exception: Multiple Major Survival Surgeries
4. Description: Up to two major surgeries are possible for a subset of animals. Both entail the implantation of a recording cylinder that allows for assessing the activity of single neurons within either a midbrain or cortical territory.
3. Exception: Water
4. Description: The fluid scheduling practices are based on the institutional fluid regulation policy as set forth by the animal care and use committee. Access to fluids is scheduled such that animals' first fluid intake of the day occurs during a training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement based on a baseline (pre-study) weight. . If adequate fluid intake is not reached during testing, the subjects are supplemented to a minimum physiological standard (based on weight). Animal status is assessed by both research and

veterinary personnel daily. Study animals are weighed with every experimental session (typically 5 x/week) and fluid regulation is suspended if weight loss exceeds a baseline criterion and/or the animal displays any sign of dehydration (e.g., decreased urine production, changes in skin elasticity).

5. Purpose and value of study: The purpose of this study is to determine how the brain combines visual and auditory information from the environment to enhance decision-making and attention in complex environments with implications for understanding a variety of sensorimotor disturbances.

1. Species (Common name): Monkey

2. Number of animals: 6

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

3. Exception: Multiple Major Survival Surgeries

4. Description: Multiple survival surgeries to implant recording cylinders may be required in this study if the first implant fails or if recording from a second brain region is needed. No more than 3 major surgeries will be conducted per animal.

5. Purpose and value of study: The experiments will help uncover how learning changes the brain. Cognitive training has emerged in the past few years as a means of restoring function lost after traumatic brain injury and to ameliorate the effects of genetic disorders such as Alzheimer's disease and schizophrenia. Our results will shed light on the underlying neural circuit changes that occur following cognitive training, and they are expected to offer insights for the design of better treatment strategies for these conditions.

1. Species (Common name): Monkey

2. Number of animals: 6

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

3. Exception: Multiple Major Survival Surgeries

4. Description: Multiple survival surgeries are required in this study for the implantation of recording cylinders to gain access for neurophysiological recordings to more than one brain area and/or both brain hemispheres. No more than 3 major surgeries will be conducted per animal.

5. Purpose and value of study: The results will offer insights into how the brain performs visual perception, and they will contribute to the body of knowledge used to design better treatment strategies for disorders of learning and memory.

1. Species (Common name): Monkey
2. Number of animals: 4
3. Exceptions: Multiple Major Survival Surgeries
4. Descriptions: 1st major Surgery: Implantation of recording cylinder over the prefrontal cortex to allow microelectrode recordings. 2nd Major Surgery: Implantation of recording cylinder over the parietal cortex to allow microelectrode recordings. 3rd Major Surgery: Implantation of recording cylinder over the prefrontal or parietal cortex of the other hemisphere.

3. Exception: Watering

4. Description: The animals' water intake is scheduled so that the first fluid intake of the day occurs during the training or experimental session. Trained animals generally work to satiety and obtain more than the minimum daily fluid requirement. If adequate fluid intake is not reached during testing, however, the subjects are supplemented to at least minimum levels afterward. Animal health is assessed every day by both research and veterinary personnel. Water regulation is suspended if subjects exhibit signs of dehydration (e.g., decreased urine production, changes in skin elasticity) or a significant reduction of body weight

5. Purpose and value of study: This project investigates the changes of prefrontal cortical physiology and functional connectivity that occur after puberty. A non-human primate model will be used which will allow us to conduct neurophysiological recordings in the prefrontal cortex of sexually immature and adult animals. A better understanding of the maturation of executive brain function will be relevant for a host of developmental conditions, including autism and schizophrenia.

1. Species (Common name): Cat
2. Number of animals: 20
3. Exception: Multiple Major Survival Surgeries
4. Description: First major surgery: implantation of muscimol-infused polymer slices into the cerebral cortex of the brain. The muscimol is released slowly into the brain tissue over a 3-4 week period. Second major surgery: a second implantation of muscimol-infused polymer slices when the first set is depleted of the muscimol. The third surgery is the implantation of a recording well/headholding device. There is anywhere from a 3-month-long to a 9-month-long interval between the second and third surgeries.

5. Purpose and value of study: The purposes of the study are (1) to determine if the cerebral cortex is the source of inputs to the midbrain (superior colliculus) by temporarily deactivating the cortex during the "critical period" of maturation, and (2) if and how the adult midbrain compensates for this loss of early cortical connections. The data obtained should give us insights into the development of the brain circuits that control our ability to merge information from multiple senses to form a coherent picture of the world. Such insights can be used in developing therapies to deal with brain abnormalities involved in such disorders as Dyslexia and other Sensory Processing Disorders.

1. **Species (Common name):** Sheep
2. **Number of animals:** 16
3. **Exceptions:** Multiple Major Survival Surgeries
4. **Descriptions:** 1st Major Surgery: Column run for blood circulation and femoral biopsy surgery to isolate endothelial progenitor cells and smooth muscle cells, respectively. 2nd Major Surgery: Implantation of a cell-seeded vascular scaffold in a sheep arterial interposition model
5. **Purpose and value of study:** This project investigates the clinical feasibility of tissue-engineered vascular grafts that uses vascular cells and a novel scaffold.

1. **Species (Common name):** Monkey
2. **Number of animals:** 10
3. **Exceptions:** Multiple Major Survival Surgeries
4. **Descriptions:** 1st major Surgery: Liver and intestinal biopsies by laparotomy. 2nd major Surgery: Liver and intestinal biopsies by laparotomy.
5. **Purpose and value of study:** This study aims to document the effects of dietary fructose on health in a relevant non-human primate model. By understanding whether fructose (more than other carbohydrates) causes liver fat to be accumulated, and uncovering the mechanism which contributes to this problem, we can advise on specific therapies for treating people with excess liver fat or, possibly advocate for changes in food production depending on the results of the study. The value of the study rests on the close gastrointestinal physiology shared between monkeys and humans, coupled with the ability to control dietary intakes such that the specific effects of fructose, uncomplicated by obesity, can be evaluated.

1. **Species (Common name):** Rabbit
2. **Number of animals:** 5
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 2 survival surgeries. 1st Surgery: 2 jejunal biopsies were taken and 1cm long strips of smooth muscle from the anal sphincter were removed. Second surgery occurred 6 weeks later, whereby bioengineered autologous tissue was implanted in IAS area.
5. **Purpose and value of Study:** This project is to test in a large animal model, a new therapeutic approach to treat Fecal incontinence. The objective is to generate data that bioengineering and implanting bioengineered intrinsically innervated IAS tissue would work.

1. **Species (Common name):** Monkey
2. **Number of animals:** 16
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 1st Major Surgery: Laparotomy to collect luteal tissue from the ovary at baseline. 2nd Major Surgery: Laparotomy to collect luteal tissue from the ovary post-treatment (following 12 months on diet). 3rd Major Surgery: Collection of oocytes following superovulation (post-treatment).
5. **Purpose and value of study:** The specific hypothesis to be tested in this study is that obesity negatively affects luteal function in female primates. Pilot data indicate that gene expression data can be collected successfully from luteal tissue from monkeys. The

study represented here will build upon the pilot data to investigate the relationship between obesity, reproductive hormones and luteal function in a larger group of monkeys.

- 1. Species (Common name):** Cat
- 2. Number of animals:** 2
- 3. Exception:** Multiple Major Survival Surgeries
- 4. Description:** 1st Major Surgery: (i) Chronic visual cortex ablation procedures; (ii) Instrumentation for recording. 2nd Major Surgery: (i) Implantation of instrumentation for chronic anesthetized physiological preparations; (ii) In select animals, the second surgery is done to place a second lesion in the associational regions of cortex once behavioral testing and rehabilitation is complete. These animals may undergo a third surgery for instrumentation. (iii) In select animals, the second surgery is done to facilitate a neurotoxic dopaminergic deafferentation of associational cortex. 3rd Major Surgery: (i) Implantation of instrumentation for chronic anesthetized physiological preparations: Following behavioral testing and a second cortical lesion, animals are instrumented with a head-holding/recording under isoflurane anesthesia.
- 5. Purpose and value of study:** Damage to regions of the cortex in humans as a consequence of stroke or traumatic brain injury can produce a type of visual deficit called the 'parietal neglect syndrome', where individuals do not notice or make eye movements toward objects in half of their visual world. We intend to induce similar deficits in experimental animals by making large visual cortex lesions in order to gain insights into why this disorder occurs and to determine if such lesioned animals can be rehabilitated using behavioral training techniques to regain some of the visuomotor capabilities that are 'lost' following brain damage.

- 1. Species (Common name):** Swine
- 2. Number of animals:** 12
- 3. Exception:** Multiple Major Survival Surgeries:
- 4. Description:** 1st major Surgery: a 17 mm diameter craniotomy (hole) is made in the skull exposing the brain. A controlled cortical impact (CCI) injury is made in the right frontal lobe and a vacuum dressing. Controlled vacuum is applied to a sub-set of animals. 2nd Major Surgery: the vacuum dressing is removed and the incision site sutured closed. The animal is allowed to recover for later evaluation by MR imaging.
- 5. Purpose and value of study:** Injury to brains are often progressive, they worsen over time due to swelling of the brain within the limited space inside the skull. Previous studies in our lab have shown that application of a controlled vacuum to other progressive injuries (burns, spinal cord, etc.) prevents or greatly decreases the severity of injury. This study examines the effect of applying a controlled vacuum to a brain that has been damaged with a contusion injury.

- 1. Species (Common name):** Swine (pig)
- 2. Number of animals:** 28
- 3. Exception:** Multiple Major Survival Surgeries
- 4. Description:** First major surgery: craniotomy to expose left side of brain. The brain is reflected and 1-2 branches of the middle cerebral artery are occluded. A vacuum dressing is placed and vacuum applied to the area of ischemia. The second major surgery: The incision is opened and the vacuum dressing removed, and the incision is re-sutured closed.

1. **Species (Common name):** Swine
2. **Number of animals:** 15
3. **Exception:** Multiple Major Survival Surgeries
4. **Description:** 1st Major Surgery: Unilateral nephrectomy for primary renal cell harvest. 2nd Major Surgery: Implantations: Bioengineered scaffolds.
5. **Purpose and value of study:** The purpose of this study is to develop a procedure to transplant kidneys in animals that have been stripped of their native animal cells and replaced with human cells. The purpose of the present study is to demonstrate that: 1] kidneys taken from pigs can be successfully placed back in pigs; and 2] blood flow within the transplanted kidney can be maintained after implantation.

1. **Species (Common name):** Swine
2. **Number of animals:** 4
3. **Exception:** Multiple Major Surgery
4. **Description:** 1st major surgery: Nephrectomy 2nd major surgery: Implantation after nephrectomy The animals in the study groups of this protocol will need to undergo a major surgery for nephrectomy to harvest one of their kidneys to use as cell donor for the seeding of the acellular scaffold. There is an estimated 2-4 weeks between the two surgeries.
5. **Purpose and value of study:** It is well known that the number of patients needing an organ transplant far exceeds the number of donor organs available. We have developed a procedure for creating transplantable organs (e.g. kidneys) from animal organs that have been stripped of their native animal cells and replaced with recipient cells. The purpose of the present study is to demonstrate that: 1) Kidneys taken from pigs can be successfully placed back in pigs after these kidneys have been stripped of their cells, and 2) blood flow within the transplanted kidney can be maintained after implantation. This research will give us a better idea of whether pig derived kidney scaffolds with cell seeding can be implanted without complications or rejection by the body's defense (immune) system.

1. **Species (Common name):** Sheep
2. **Number of animals:** 4
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Thoracotomy approach but does not enter pleural cavity- Chamber placement 2nd major surgery: Bone graft harvest /mandibular defect. This protocol will require 2 thoracotomies 9 weeks apart. The first is for bone harvest and chamber placement. The second is required for chamber removal and placement in the mandibular defect.
5. **Purpose and value of study:** Large bone defects of the face remain a clinical challenge to repair. Vascularized flaps (sections of bone with attached artery and vein) are optimal for large defects as the transferred vessels provide the bone with consistent supply of oxygen and nutrients for survival of the whole section of bone. However, there are few donor sites for vascularized flaps in the body. We propose a study where a molded chamber is used to generate bone or preosteogenic tissue (tissue that has potential to become bone) on the ribs which can be transferred to the defect. We

hypothesize that cell-free chamber containing the proper materials, presents a simple platform technology which can be translated to the clinic more readily than those with cellular components.

1. **Species (Common name):** Cat
2. **Number of animals:** 5
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Surgical Revision to Reposition Corneal Graft; the 2nd major surgery: DSAEK with implantation of human corneal tissue- Second Surgery will be one week later. This staggering of the membrane destruction and the implant procedures allows the study to obtain pachymetry results with the new instrument and evaluate the statistics of quantitative data obtained during in-life evaluation of animals receiving a unilateral DSAEK.
5. **Purpose and value of study:** Corneal blindness is a major cause of blindness in the world today. The cornea is the transparent front part of the eye, and unfortunately it cannot rebuild itself. Damage leads to loss of transparency and vision. This condition is treated by various types of corneal transplantation, but these approaches include several potential complications that often result in poor vision. A new method of cultivating human corneal endothelial cells has been developed that may greatly reduce the disadvantages of current transplant methods.

1. **Species (Common name):** Swine
2. **Number of animals:** 18
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Hepatectomy: The animals in the study groups of this protocol will need to undergo a major surgery for a partial hepatectomy for use as cell donor for the seeding of the acellular scaffold. 2nd major surgery: Implantations: Bioengineered scaffolds: The animals will have a transplantation of the scaffold. after the hepatectomy procedure. There is an interval of 2-4 weeks between surgeries.
5. **Purpose and value of study:** Currently, there are many more patients awaiting a liver transplant than the number of organs available. Bio-engineered livers using small amounts of a patient's own healthy cells represent one possible solution to this problem. In the proposed study, engineered liver made with pig tissue will be surgically transplanted in pigs, and adequate blood flow and tissue function will be assessed.

1. **Species (Common name):** Rabbit
2. **Number of animals:** 22
3. **Exception:** Multiple Major Survival Surgery
4. **Description:** 1st major surgery: Partial hysterectomy; 2nd major surgery: Transplantation of Bioengineered Uterus Scaffold ; 3rd major surgery: Cesarean Section: One major surgery is required in order to obtain the cells needed for seeding of the scaffold. The second surgery is necessary in order to transplant the uterus. There will be at least four weeks between surgeries. A Cesarean section is necessary in order to

assess if the animal have implanted in our transplanted portion of the uterus or in the areas surrounding it. This is a functional endpoint of the study.

5. Purpose and value of study: The CDC reports that 5 of every 1000 women in the U.S. have had a hysterectomy, surgical removal of the uterus. We propose that a uterus substitute organ can be grown in the laboratory using cells from the patient that has been seeded on synthetic mesh (scaffold) material. The ultimate goal of this project is find a method to repair uterine tissue and return reproductive health for women.

- 1. Species (Common name):** Chinchillas
- 2. Number of animals:** 10
- 3. Exception:** Pain E
- 4. Description:** Transbullar inoculation of the animals will result in the development of otitis media.
- 5. Purpose and value of study:** Streptococcus pneumoniae is a human pathogen that is the main cause of community-acquired pneumoniae and meningitis in the pediatric population, and a leading cause of middle ear infection. Middle ear infection is one of the leading causes of illness in children with 50-85% of children aged 3 having had the disease. Thus, it is of great importance to continue to research novel treatment alternatives. This pilot study is to test the effectiveness of a novel eardrop formulation for the treatment of S. pneumoniae middle ear infection.
- 6. Justification:** The use of analgesics during infection and experimental treatment would alter the host response to the infection and the course of disease. In this case, the true therapeutic nature of the test agent would be impossible to interpret. Frequent monitoring for more than mild discomfort was carefully monitored.

- 1. Species (Common name):** Prairie Vole
- 2. Number of animals:** 8
- 3. Exception:** Pain E
- 4. Description:** **Partial spinal nerve ligation.** Subject is anesthetized while the L5 spinal nerve is ligated to induce a model of increase sensitivity to touch.
- 5. Purpose and value of study:** Recent research indicates that a person's social support system - positive or negative - influences the people's sensitivity to pain, their response to pain treatment, and the development of chronic pain. Humans are relatively unique among mammals in that they form long-lasting pair bonds between males and females, and the males contribute to the rearing of offspring. Most preclinical pain research has been performed in rodents, typically mice and rats, which do not form such pair bonds. Prairie voles do pair bond and display human-like social behaviors. In these studies, we will examine how pair-bonding in prairie voles influences pain sensitivity. The goal is to develop an animal model that is capable of showing how social interactions affect pain in people, to understand the underlying brain mechanisms, and to find new treatment modalities.
- 6. Justification:** The model of pain used here produces allodynia, or elevated sensitivity to touch, rather than actual pain. It is believed that this model is only

moderately discomforting or painful and only when touch is applied to the affected limb. Except during the brief period of touch sensitivity testing, the animal avoids contact with the limb and otherwise behaves normally. The effects of pain on social behavior and the effects of social pair bond formation on pain sensitivity were assessed in this study; therefore, no analgesics were given during pain sensitivity testing.

USDA 2013 Annual Exemptions

Cage Size:9 Dogs

In order to ensure appropriate anesthetic recovery and prevent post-operative complications, animals were maintained in ICU cages for up to 48 hours. The institution's veterinary clinical staff determined the necessity, type, and length of the ICU stay based upon the patient's recovery condition. While cages did not meet the requirement of at least 6 inches clearance from the highest point of the standing dog or the minimum required floor space for all the dogs, the dogs were able to make normal postural adjustments and assume normal standing posture with clearance from the top of the cage. These dogs were also given extra hands-on care and attention by the veterinary staff during the ICU period.

Water Restriction:45 rhesus macaques

As justified on the approved protocol, these animals experienced varying degrees of water provision. The animals had the opportunity to earn as much fluid as they desired during training/testing sessions. On non-study days animals received supplemental water. Veterinarians routinely evaluated the animals to ensure adequate hydration and no adverse physiology related to metered water.

Single Housing:7 Non-Human Primates

As justified in the approved protocol, select animals underwent surgery and were housed singly to prevent cage-mate induced trauma to the surgical site and/or implant. Singly-housed animals participated in continuous auditory, olfactory, visual contact with conspecifics, daily human interaction, received regular novel treats and enjoyed other enrichment.

8 Non-Human Primates

As justified in the approved protocol, select animals were singly housed to prevent infection of other animals. Singly-housed animals participated in continuous auditory, olfactory, visual contact with conspecifics, daily human interaction, received regular novel treats and enjoyed other enrichment.

2 Non-Human Primates

Select animals were singly housed due to absence of appropriate conspecifics. One animal was the sole member of the species and no appropriate alternate species was available. One animal was the only male in the room and breeding was neither a research aim nor a desirable outcome. Singly-housed animals participated in continuous auditory, olfactory, visual contact with conspecifics, daily human interaction, received regular novel treats and enjoyed other enrichment.

12 Non-human Primates

Select animals were singly-housed for clinical care requirements post- anesthesia for less than 30 days. The institution's veterinary clinical staff was consulted to determine the necessity, type, and length of single housing. Singly-housed animals participated in continuous auditory, olfactory, visual contact with conspecifics, daily human interaction, received regular novel treats and enjoyed other enrichment.

30 Non-human Primates

After multiple attempts to socially house, the institution's veterinary staff determined select animals were incompatible with other conspecifics. Singly-housed animals participated in continuous auditory, olfactory, visual contact with conspecifics, daily human interaction, received regular novel treats and enjoyed other enrichment.